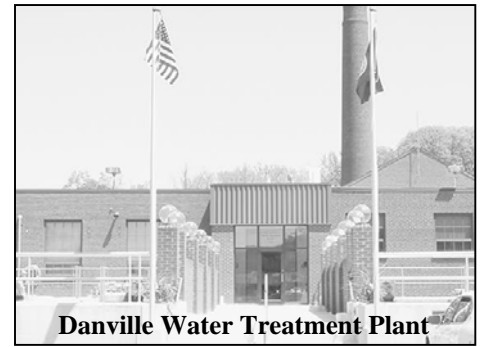




# City of Danville Water Quality Report



The City of Danville is pleased to present this Water Quality Report for calendar year 2005. The information included will confirm that we distribute excellent quality, safe drinking water. We have been doing so since 1876. Your drinking water is carefully protected from the Dan River, through our treatment plant, and to your tap. Under the Safe Drinking Water Act, the U.S. Environmental Protection Agency (EPA) is responsible for setting national limits for hundreds of substances in drinking water and for specifying treatment processes to remove them. We continually monitor for these substances and report results to State and Federal regulating agencies. State-certified water quality labs perform over 4,000 tests of water samples each month. Our treatment and distribution facilities are periodically inspected by the State.

If you have questions about this Water Quality Report or want more information about your drinking water, contact the Water Plant during business hours of 8:00 a.m. – 5:00 p.m. at 434-799-6473. Tours of our facilities are scheduled during business hours. To report **leaks or tank over flows** please call 799-5284 at any time, day or night. For **customer service**, please call 799-5155. If you have **billing questions**, please call 799-5159.

We hold ourselves accountable to the public. Opportunities for increased understanding and involvement in water-related decision and policy making include attendance at **Danville Utility Commission Meetings**, held at 4:00 p.m. on the fourth Monday of each month on the fourth floor at city hall, and **Danville City Council Meetings**, held at 7:00 p.m. on the first and third Tuesday of each month at City Hall. City Council meetings are broadcast on Adelphia cable TV channel 20.

**System Improvements** – Only one project is included in the next two years. The renovation of the Ballou Park pump station.

**Plant Improvements** – Two new Fluoride storage tanks were installed therefore no Fluoride was fed during August to November 2005.

**Conservation** – The city encourages all customers to conserve water when they can. Everyone should be good stewards of our natural resources.

**Regulations Update**– There are two federal regulations and one state regulation that the city must address in the next few years. The federal regulation will require more monitoring of the raw water and treated water. The results of the monitoring will determine if additional treatment will be needed. The state regulation requires localities to do a water supply study that was instituted because of the severe drought that the state experienced from 1999 to 2002.

TREATED WATER CHARACTERISTICS	
PARAMETER	TYPICAL VALUES
pH, standard units	7.3
Alkalinity, mg/L	26
Calcium, mg/L	24.5
Conductivity, micromhos/cm	134
Total Hardness, mg/L	44
Phosphate, mg/L	0.88
Sodium, mg/L	<5-12.3*
Zinc, mg/L	<0.2
Iron, mg/L (SMCL=0.3)	0.30
Manganese, mg/L (SMCL=0.05)	<0.01
Water temperature, °F	
Summer	67 – 79
Winter	41 – 57
Annual average daily production – 6.47 MGD	
SMCL-Secondary Maximum Contaminant Level	
* Varies with type of post pH adjustment used	

**Source Water** – Danville’s drinking water comes from what is classified as a surface water source, the Dan River. The Virginia Office of Drinking Water conducted a source water assessment on the Dan River in 2002. The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last five years. The report is available by contacting Barry Dunkley, at the Water Plant. The river was determined to be “highly susceptible” to contamination using the criteria developed by the State in its approved Source Water Assessment Program. The sources of substances in the Dan River come from surface runoff as water travels over the surface of the land and dissolves naturally occurring minerals and substances resulting from the presence of animals and human activity. Contaminants that may be present in source water include: microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems; and radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities. The presence of these substances in pretreated water does not necessarily indicate that the treated water is unsafe. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about

drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline 1-800 426-4791 or EPA web page: [www.epa.gov/ow](http://www.epa.gov/ow).

**Water Quality Summary:** In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water produced by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. We constantly monitor for various compounds in the water supply to meet all regulatory requirements. The table on the following page lists only those compounds that had some level of detection. Many other compounds have been analyzed, but were not present or were below the detection limits of the lab equipment. For more information about the City of Danville Water Treatment Plant or any other Divisions within the City of Danville organization, please visit <http://www.danville-va.gov/home.asp>

# REGULATED COMPOUNDS

Contaminant & Unit of measurement (1)	MCL/ G	MCL	Level Detected And / or Range	Violation	Date of Sample	Sources of Substance or Compound
Gross Alpha (2)	0	15	0.4	NO	May 2002 Every 6 Yrs.	Erosion of natural deposits
Combined Radium (pCi/L)(2)	0	5	0.8	NO	May 2002 Every 6 Yrs.	Erosion of natural deposits
Turbidity – (NTU)	N/A	TT = 1 NTU max	0.29 Range: 0.05 – 0.29	NO	Tested continuously at plant	Soil runoff
		TT = at least 95% of the monthly samples <0.3 NTU	100%		N/A	
TTHMs (trihalomethanes) (ppb)	N/A	80	Max 4 qtr Avg 43 Range: 18.6 – 65	NO	Tested quarterly at four locations in our service area	By-product of drinking water chlorination
Fluoride – (ppm)	4	4	Avg: 0.96 ppm Range: 0.03 – 1.18	NO	Tested daily at a minimum of 80 locations in our service area	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories; desired level 0.9
Nitrate – (ppb)	10	10	0.27	NO	November 2005 Annually	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Lead – (ppb) (2)	0	AL = 15	90 <sup>th</sup> % = 5 (3) ND – 889 2 out of 35 exceeded AL	NO	2003 Every 3 Yrs.	Corrosion of household plumbing systems; erosion of natural deposits
Copper – (ppm) (2)	1.3	AL = 1.3	90 <sup>th</sup> % = 0.060 (3) ND – 0.210 0 out of 35 exceeded AL	NO	2003 Every 3 Yrs.	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Chlorine – (ppm)	MRDL L = 4	MRDL = 4	Highest Qtrly Avg 1.48 Range: 0.03-2.20	NO	Tested monthly at a minimum of 80 locations in our service area	Water additive used to control microbes.
Haloacetic Acids (HAA) – (ppb)	N/A	60	Max 4 qtr Avg 32 Range: 25 – 41	NO	Tested quarterly at four locations in our service area	By-product of drinking water disinfection
Total Organic Carbon (TOC) – (ppm)	N/A	TT – Based on the percentage of TOC removed during the treatment process; ratio must be greater than or equal to 1.00	Lowest Running Avg 1.49 Range: 1.0 – 1.9	NO	Tested monthly at raw and treated water.	Naturally present in the environment.

**Definitions and Table Key:** ( 1) Detected Compounds - Listed are 11 parameters detected in Danville's drinking water, 7 parameters during calendar year 2004. The state allows us to monitor for some compounds less than once per year because the concentrations of these compounds do not change frequently. Therefore, data marked with a (2) is the latest available. The SDWA requires that the highest value/ lowest removal ratio detected during the calendar year be provided in this report. Not listed are the hundreds of other compounds for which we tested that were not detected. (3) – Compliance based on 90% of samples being below action level. NA – Not Applicable. ND – Non Detect. < - Less than. Trihalomethanes – Compounds formed during the chlorination (disinfection) of drinking water. MCL - (Maximum Contaminant Level) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the Maximum Contaminant Level Goals as feasible using the best available treatment technology. pCi/L – (Picocuries per Liter) – A measure of radioactivity. MCLG - (Maximum Contaminant Level Goal) – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety. MRDL – (Maximum Residual Disinfectant Level Goal) – the highest level of a disinfectant allowed in drinking water. MRDLG - (Maximum Residual Disinfectant Level Goal) level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect benefits of use of disinfectants to control microbial contaminants. NTU - (Nephelometric Turbidity Unit) – A measure of very small particulate matter in drinking water. Sources – The major sources of the compounds detected in the finished water. ppb – One part per billion; the equivalent of 1¢ in \$10,000,000. ppm – One part per million; the equivalent of 1¢ in \$10,000. AL - (Action level) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. TT – (Treatment Technique) – A required process intended to reduce the level of a contaminant in drinking water. Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. The results of our UCMR monitoring are available by contacting the waterworks representative noted elsewhere in the report.